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- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
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(54) Title: FUNCTIONALIZED POLYMERS AND THEIR BIOMEDICAL AND PHARMACEUTICAL USES

(57) **Abstract:** Disclosed is a polymer of the formula (I), wherein: Z is -O- or -NH-; R<sub>1</sub> represents a non-functional backbone of a hydroxy acid or amino acid derived from a cyclic ester or diester or cyclic amide or diamide monomer (A); R<sub>2</sub> represents a non-functional chain derived from an epoxide monomer (B), said chain ending with a graftable hydroxy or carboxylic group; n is the number of units derived from the monomers (A); m is the number of units derived from the monomers (B); and x is equal to n-m, the ratio m/x ranging from 0.005 to 0.30. Also disclosed is a process of preparing this functionalizable polymer to the hydroxy or carboxylic groups of which can be grafted a compound selected from the group consisting of: ligands specific to cellular receptors, such as Selectine E; lipids; peptides; polyethers; polyacrylates; natural polymers; polyosides; antigens or antibodies; salen; and cyclodextrins. The so grafted polymer can be used as carried or excipient in the biomedical and pharmaceutical fields.



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